Fujica ST Series

Top Cover and Focus Screen Removal Guide

This guide covers removing the top cover from most Fujica ST Series cameras – It is based on the ST705, ST705W and the AZ1. The procedure is identical for the ST605 and ST605N.

Be aware that the ST705W and the AZ1 are somewhat different in their construction and there is a special section for these at the end of this guide.

Before starting work you are advised to read the entire guide to familiarise yourself with the process.

Astro Baby

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DISCLAIMER
The guide assumes a certain familiarity with lenses and the use of suitable tools.
The quality of any repair or refurbishment work relies on your skill and suitable tools to carry out tasks.
The author accepts no liability for any damage howsoever caused by the use of this guide.

Fujica ST705 Top cover and focus screen removal guide.

Although this guide is based mostly around ‘Mia’ and ‘Tula’ my own Fujica ST705 and ST705W the basis will hold true for a great many of Fujica cameras of this period. The 605 particularly will be identical in take down. For the ST705W and the AZ1 a special section is included at the rear of the guide.

You should read the addendum on the ST705W and AZ1 before commencing work.

Before starting

Set the shutter speed and film speed dial of the camera to a known value and make a note of this. This will help in the reassembly phase.

In the attached picture the film speed has been set to 125/s and the film speed has been set to ASA 400.

Step 1

<u>Removing the top plate</u>

Use a rubber gloves or a rubber bung to press firmly down on the rewind lever hub while turning clockwise.

You may have to exert quite a bit of pressure here but with patience the hub will start to unscrew. Some versions may have used a glue or lacquer here. You may need to use some isopropyl alcohol swabbed sparingly around the fitting to break down the glue.

Be aware the 705W can have a left-hand thread AND you do not need to remove the rewind lever to remove the top cover of the camera. See notes on the 705W at the end of this guide.

Step 2

Once the hub is loose you can easily unscrew it the rest of the way with your fingertips.

Step 3

The hub is now removed and laid aside. It’s a good idea to have some small pots available to place small components in.

Step 4

The winder lever is now free. Note the position of the washer with its outer flanges facing upwards.

Step 5

The winder lever will simply pull free – note in this photograph the washer on top of the winder lever is actually reversed.

Step 6

Beneath the winder there is a small brass washer. Note that the slot on this is facing forward. This washer can simply be removed using a pair of tweezers.

Step 7

Beneath the small brass washer in Step 6 there is a cam type washer. Note its position and orientation.

Step 8

Beneath the cam type washer there is a thin black washer made of something similar to Teflon. Note its position with the cut out hole to the front of the camera.

This completes disassembly of the winder lever top assembly.

Step 9

To remove the rewind knob you need to carry out the following two steps together.

Insert a screwdriver or other thin bladed metal tool between the film retaining/rewind spindle…..

Be careful here as you do not want to break the legs on the spool.

…….Now with the screwdriver holding the film rewind spindle in place you can now unscrew the top cap of the film rewind knob.

The knob should remove quite easily by rotating it clockwise. If it is stuck wrap the knob in some insulating tape and remove using grips.

The rewind capstan is different between some Fujicas – on some the rewind capstan is held down by a screw in others its part of the rewind capstan.

Step 10

Using a rubber glove or rubber bung press down on the small silver plate washer that sits underneath the film rewind known and turn clockwise. This may take some effort but repeated attempts and patience will remove this. On some early model Fuji cameras this component had a glue applied underneath. Fortunately, age will have caused most glue to break down. If not apply some isopropyl alcohol and/or some heat.

Be very careful here as the rewind spool guide under this is of a frangible plastic. Do not exert undue force or you will risk breaking the guide.

Here is the small silver washer plate being removed. The remains of what was most likely a Loctite type substance can be seen beneath the plate.

Step 12

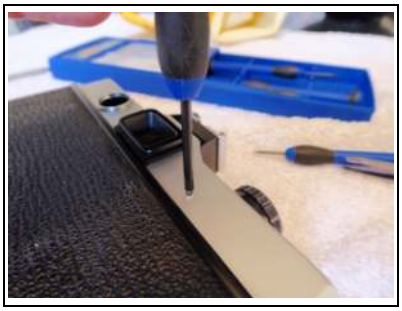
Unscrew the battery compartment and remove the batteries. Normally I would do this first but, on this strip down I wanted to be sure I could remove the other components before I bothered taking the batteries out.

Step 13

With the winder lever removed it's easy to access the small screw on the shutter button. This screw does not need to be removed entirely. With the screw slackened off……..

……The shutter button will fall free. Retighten the screw but not too tight so that it is not lost. Alternately you can remove it entirely if you wish.

On the ST705W and the AZ1 you can omit this step.

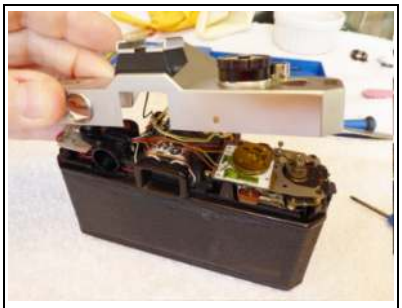


Step 14

Remove the small screw to the rear of the camera top plate.

Step 15

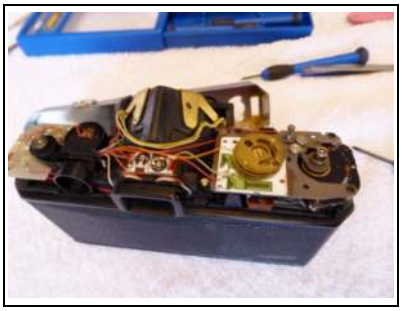
Remove the small screw to the right of the camera top plate.



Step 16

If you haven't already done so set the film speed and shutter speed to a known value and make a note – ie set the shutter to 125 and the film speed to ASA 400

The top plate of the camera should now simply come free – it may need a little wiggle to get it to come away. Be careful that you do not force this away to roughly as there is a small lead that leads from the camera body to the flash hot shoe on the camera top plate. This can be de-soldered.

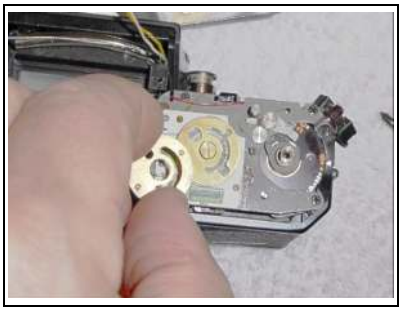


The camera with its top plate removed. Pay special attention to the next two steps……

Step 17

The shutter speed and film speed selector is the large brass assembly in the centre of the picture. In order to reassemble easily it is best if you leave this alone and just keep a note of what film and shutter speed was selected.

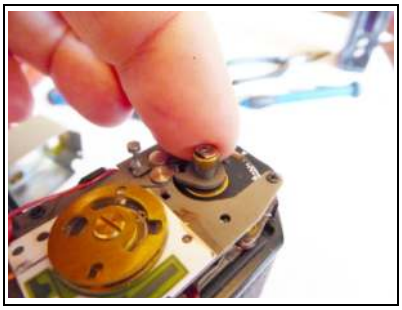
The film/speed selector has a brass washer that has the same grooves on it. This may come away with the camera top plate…



…Or may stay attached to the shutter speed control brass element.

The picture shows the brass top washer with its identical grooves being removed from the shutter speed/film speed selector.

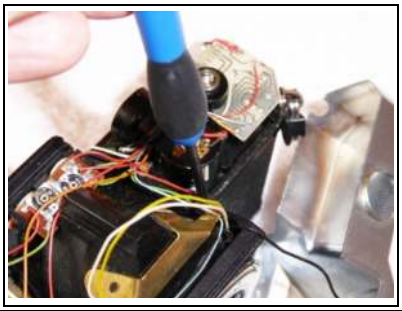
This washer has indents in its face which allow it to mate to the speed selector – examine this and make a note.



Step 18

The film winder spine has a small brass spacer on its top. This may easily fall free if the camera is handled while in a disassembled state.

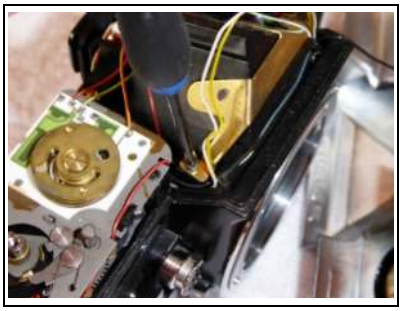
Remove this spacer element and store until reassembly.



Step 19

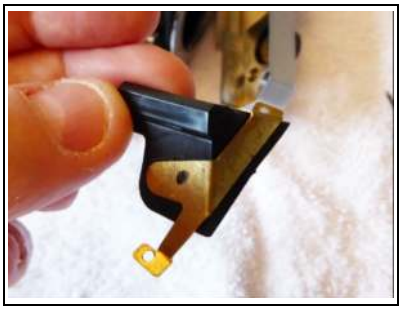
<u>Removing the prism assembly</u>

Remove the small screw to the side of the prism that holds down the prism retaining assembly. The prism retainer is a brass and plastic component holding the prism in place.



Step 20

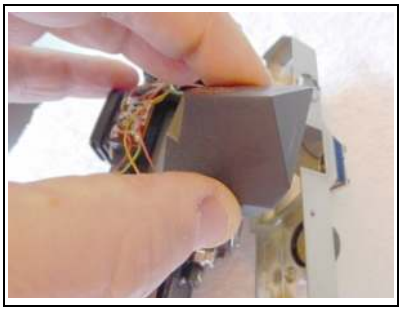
Remove the screw on the other side of the prism retaining assembly.



Step 21

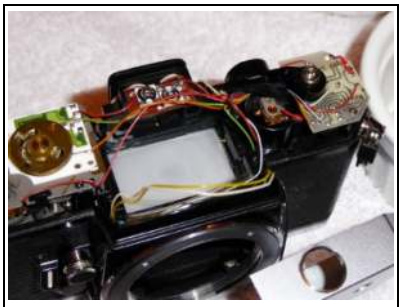
The prism retaining assembly will now simply pull free.

It is normally a single piece with the brass glued to the plastic but on this camera the glue has broken down and the brass and plastic quickly parted company.



Step 22

The prism will now wiggle free quite easily. When reassembling make sure that the prism is in the correct position before full reassembly. It can feel as if it is right even when it isn't. A quick check through the viewfinder will confirm whether all is right.



Step 23

The focus screen is now visible from the top. To clean the screen should be blown clean only but should debris not blow off it can be VERY gently brushed with a suitable lens brush.

DO NOT USE ANY CHEMICALS ON THE FOCUS SCREEN OR DAMAGE WILL RESULT.

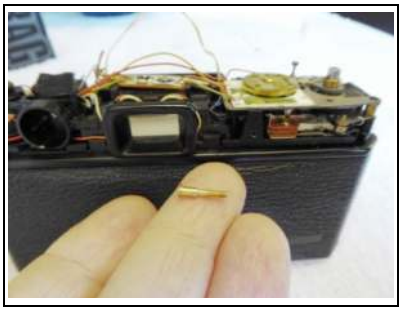
NOTE: Not shown is the thin film element of the exposure meter – this will blow out easily and needs to be handled very carefully with tweezers. When replacing it simply lays on top of the surround of the focus screen. Exercise maximum caution at this stage. The exposure meter needle is extremely fine and fragile and with the prism removed is exposed to the risk of damage.

Step 24

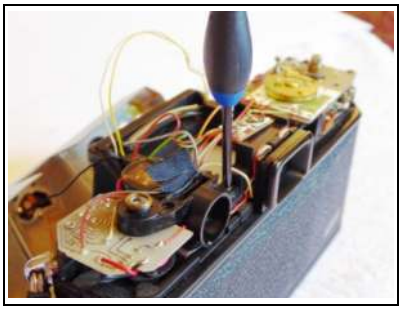
<u>Removing the focus screen</u>

Remove the brass headed screw to the right of the viewfinder. Note that two black cables run behind the screw and make a note of this for reassembly.

Note the small circuit board on top of the viewfinder.

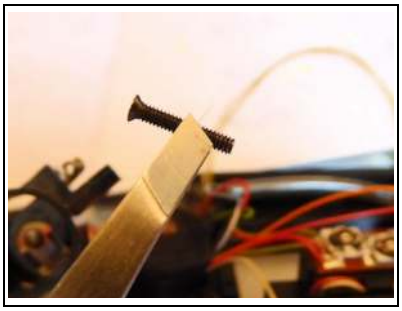


Here is the brass screw removed. It has a turret head and I assume this is intentional to keep wires away from underneath the shutter speed selector.

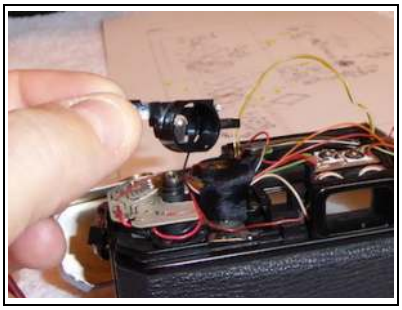


Step 25

Remove the small black headed screw to the left of the viewfinder.



Here is the screw removed. It's quite a long screw.



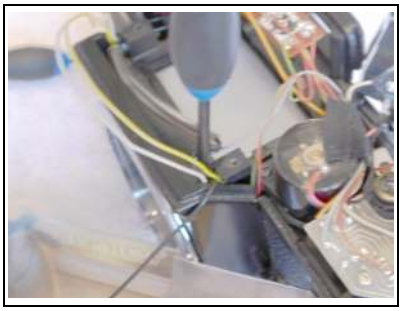
Step 26

With the two screws to the side of the viewfinder removed in steps 24 and 25 the battery compartment can now be slipped away from the film spool/rewind spindle…….

Step 27

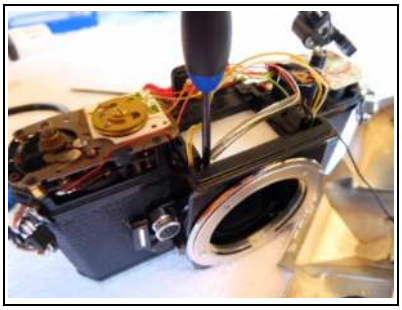
……and the viewfinder will now come free. This can be cleaned if desired. Be careful of the two small photo sensors to each side of the viewfinder.

In order for the viewfinder to be freed up sufficiently you may need to push the small circuit board on top of the viewfinder to the front of the camera releasing it from the top of the viewfinder.



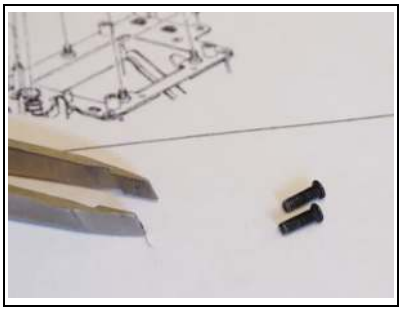
Step 28

Remove the first of the two small screws immediately in front of the open screw holes where the prism retaining component was fitted. You will have to push some wires out of the way to get access to these……..

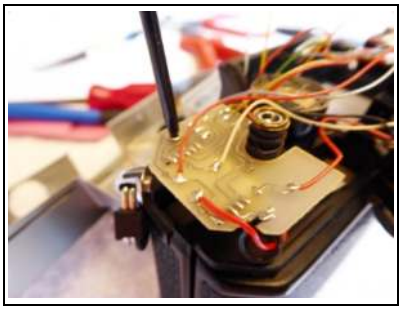


Step 29

Remove the second screw at the front of the camera immediately in front of the open screw hole where the prism retainer was fitted.

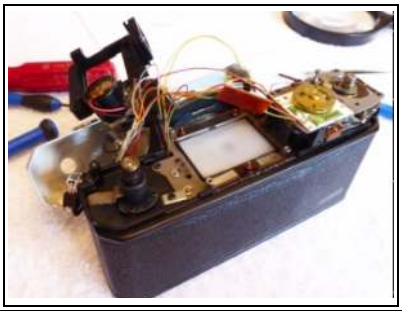


The two small screws removed from the front of the camera.



Step 30

Unscrew the small silver coloured screw that retains the circuit board around the rewind spindle/film spool.

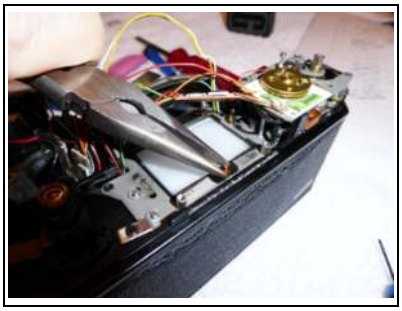


Step 31

Carefully push all of the wiring, circuit boards and the prism base with its attached light meter to the front of the camera.

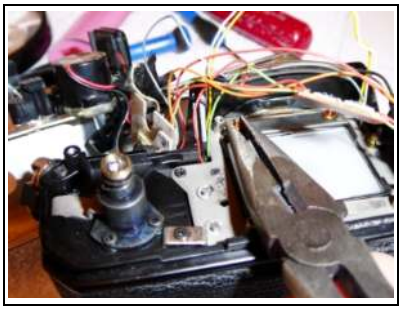
NOTE: Exercise extreme caution with these components paying especial attention to the light meter sensors either side of the viewfinder and the meter needle.

NOTE: SEE STEP 40 before continuing.



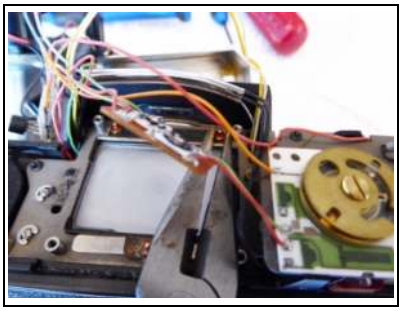
Step 32

The focus screen and its holder is retained by three small nuts. These need to be removed. Underneath these nuts is a sprung steel plate. The nuts can be removed more easily if pressure is applied to the plate to free the nut from tension.
Picture shows the rearmost nut being removed with pliers.



Step 33

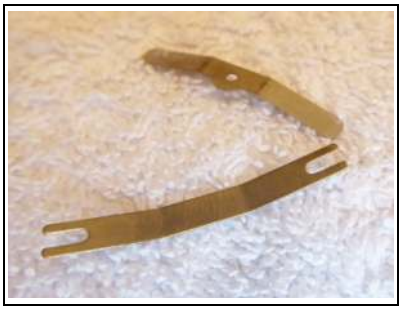
The two forward nuts are now removed from the left……



Step 34

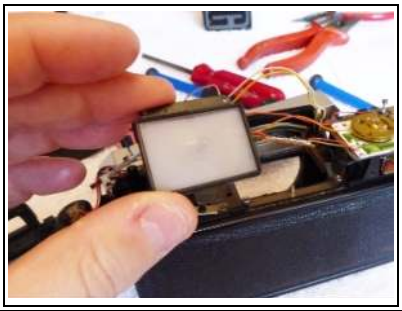
….and the right side of the focus screen.

NOTE: Extreme care is needed here to not allow tools to impact the focus screen and cause damage. The screen is extremely fragile.



Step 35

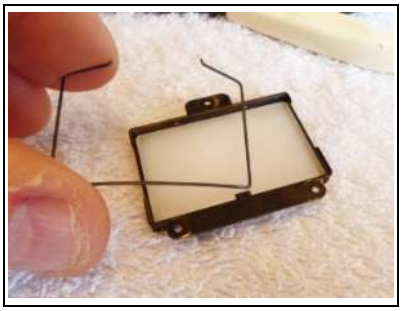
With the nuts removed the springs will easily slip out. The picture shows these parts removed.



Step 38

With the springs removed the focus screen and its holder can be extracted easily.

The holder showed fragments of light seal material around its edges. Much of this had broken up and was the cause of the muck and debris on the focus screen.



Step 39
The focus screen is held to its holder by a spring as shown in the photograph. The holder has two small holes at the rear which the flying ends of the spring go into. To replace the spring locate the flying ends of the spring into the holes and then latch it underneath the small tab at the front of the focus screen holder.

With the spring removed the focus screen will simply drop from the holder.

Step 40 - Alternative Screen Removal (Maybe !)

Rather than extract the whole focus screen assembly it *may* be possible to remove the focus screen while the focus screen holder is in place. The retaining spring for the focus screen (Step 39) is clearly visible while the focus screen holder is in place. Whether the spring could be replaced *in situ* I do not know.

Notes on reassembly

Re assembling the camera is a straight reversal of the strip down steps. However one tricky element is the getting the top plate back onto the camera.

The shutter speed dial needs very careful alignment. And even then can cause problems. From trial and error I found the best way was to plate the top plate on the camera with the shutter speed dial at its preset position (see Step 16) and then apply a gentle pressure while wiggling the shutter speed dial on the top plate – you should feel a solid click as the top plate shutter speed dial locates with the brass selector gear underneath.

While twiddling the shutter speed dial you need to apply some downward pressure to the outer part of the knob to stop the ASA/DNIN film speed dial from being pressed out of position by the small pin that locates it to the film speed selector.

It sounds complicated but actually its quite easy. With the shutter and film speed set to a known quantity and a note taken of the brass gear underneath you simply place the top plate on the camera and while firmly holding the outer ring of the shutter speed dial with a downwards pressure apply a light downward pressure onto the top plate – if there is a gap then turn the shutter speed knob slightly while applying a downward pressure – you will feel a click as it locates into the gear.

ADDENDUM – FUJICA ST705W and AZ-1

Fujica ST705W and AZ1 Special Notes

For the Fujica ST705W and the AZ-1 the top cover removal is somewhat different and far simpler.

This section will most likely apply to any similar Fujica which has a motor drive/auto winder connection and I suspect the changes were made in order to simplify manufacture.

You do not need to remove the advance lever on either the ST705W or the AZ-1

Before starting

Set the shutter speed and film speed dial of the camera to a known value and make a note of this. This will help in the reassembly phase.

In the attached picture the film speed has been set to 125/s and the film speed has been set to ASA 400.

Step 1

To remove the rewind knob you need to carry out the following two steps together.

Insert a screwdriver or other thin bladed metal tool between the film retaining/rewind spindle…..

Be careful here as you do not want to break the legs on the spool.

…….Now with the screwdriver holding the film rewind spindle in place you can now unscrew the top cap of the film rewind knob.

The knob should remove quite easily by rotating it clockwise. If it is stuck wrap the knob in some insulating tape and remove using grips.

The rewind capstan is different between some Fujicas – on some the rewind capstan is held down by a screw in others its part of the rewind capstan.

Step 2

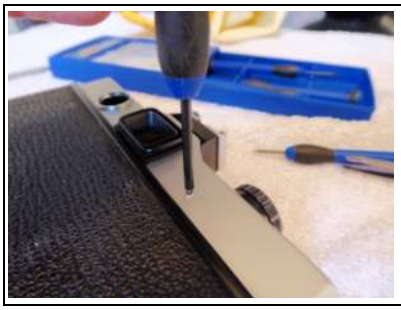
Using a rubber glove or rubber bung press down on the small silver plate washer that sits underneath the film rewind known and turn clockwise. This may take some effort but repeated attempts and patience will remove this. On some early model Fuji cameras this component had a glue applied underneath. Fortunately, age will have caused most glue to break down. If not apply some isopropyl alcohol and/or some heat.

Be very careful here as the rewind spool guide under this is of a frangible plastic. Do not exert undue force or will risk breaking the guide.

Here is the small silver washer plate being removed. The remains of what was most likely a Loctite type substance can be seen beneath the plate.

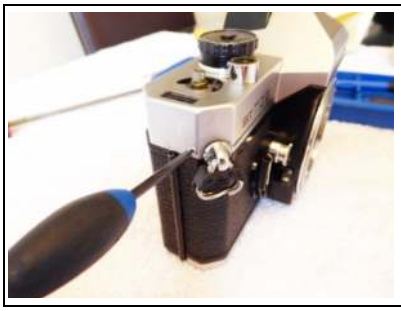
Step 3

Unscrew the battery compartment and remove the batteries. Normally I would do this first but, on this strip down I wanted to be sure I could remove the other components before I bothered taking the batteries out.



Step 4

Remove the small screw to the rear of the camera top plate.



Step 5

Remove the small screw to the right of the camera top plate.

Note
On the ST705W and AZ1 you do not need to remove the film advance lever but should you need to remove this for other reasons you will need to remove the trim plate from the top. A rubber bung may work here as per the ST705 guide but usually this fitting is dogged down very tight. Apply some isopropyl alcohol around the trim plate and some heat. You should be able to lever the trim plate up with the tip of a scalpel without damaging the plate.

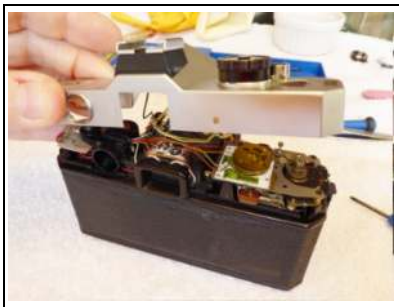
Under the trim plate is a fitting with spanner slots**.**

THIS IS REVERSE THREADED – EXERCISE CAUTION AS THE THREAD UNDERNEATH IS VERY THIN AND IT WOULD BE VERY EASY TO SHEAR THE CAP AWAY.

This part has been lacquered in place on both cameras I have worked on. Isopropyl alcohol and some heat will be required to free it.

Under the lever you will find a washer assembly – make a note of its position and note that it is located into two slots. Below the washer is a fitting which is permanently affixed to the camera top.

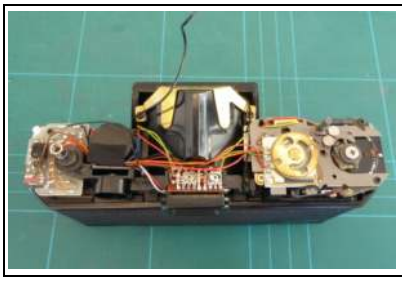
DO NOT TRY TO REMOVE THIS FITTING - IT IS NOT DESIGNED FOR REMOVAL AND IS RIVETED TO THE CAMERA TOP PLATE.



Step 6

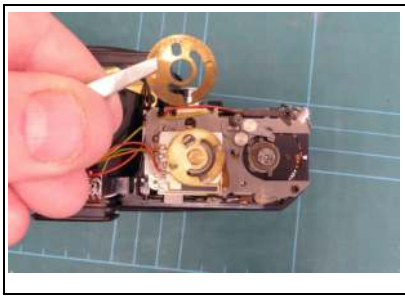
If you haven't already done so set the film speed and shutter speed to a known value and make a note – ie set the shutter to 125 and the film speed to ASA 400

The top plate of the camera should now simply come free – it may need a little wiggle to get it to come away. Be careful that you do not force this away to roughly as there is a small lead that leads from the camera body to the flash hot shoe on the camera top plate. This can be de-soldered.



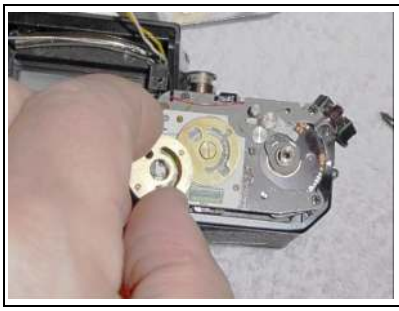
The ST705W camera with its top plate removed. Pay special attention to the next two steps……

For the AZ-1 see the notes at the end of this guide.



Step 7
The shutter speed and film speed selector is the large brass assembly in the centre of the picture. In order to reassemble easily it is best if you leave this alone and just keep a note of what film and shutter speed was selected.

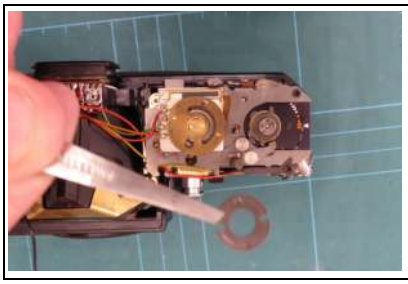
The film/speed selector has a brass washer that has the same grooves on it. This may come away with the camera top plate…



…Or may stay attached to the shutter speed control brass element.

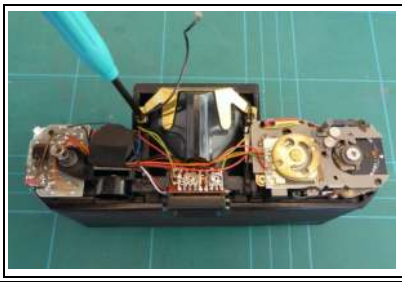
The picture shows the brass top washer with its identical grooves being removed from the shutter speed/film speed selector.

This washer has indents in its face which allow it to mate to the speed selector – examine this and make a note.



Step 8

The film winder spindle has a small washer with cuts outs and spines on it. Remove this to prevent it falling loose while you work.



Step 9

<u>Removing the prism assembly (ST705W)</u>

Prism removal is identical for the ST705W so refer to the ST705 Guide.

Removing the prism assembly (AZ-1)

Removing the prism on the AZ-1 presents special challenges as the prism is covered by a flex circuit which is extremely fragile. The author has never removed this element from an AZ-1.

Notes on reassembly

Re assembling the camera is a straight reversal of the strip down steps. However, one tricky element is the getting the top plate back onto the camera.

The shutter speed dial needs very careful alignment. And even then can cause problems. From trial and error I found the best way was to plate the top plate on the camera with the shutter speed dial at its preset position (see Step 16) and then apply a gentle pressure while wiggling the shutter speed dial on the top plate – you should feel a solid click as the top plate shutter speed dial locates with the brass selector gear underneath.

DO NOT FORGET TO REPLACE THE SHUTTER SPEED DIAL WASHER OR THE WINDING LEVER WASHER(S).

While tweaking the shutter speed dial you need to apply some downward pressure to the outer part of the knob to stop the ASA/DNIN film speed dial from being pressed out of position by the small pin that locates it to the film speed selector.

It sounds complicated but actually its quite easy. With the shutter and film speed set to a known quantity and a note taken of the brass gear underneath you simply place the top plate on the camera and while firmly holding the outer ring of the shutter speed dial with a downwards pressure apply a light downward pressure onto the top plate – if there is a gap then turn the shutter speed knob slightly while applying a downward pressure – you will feel a click as it locates into the gear.